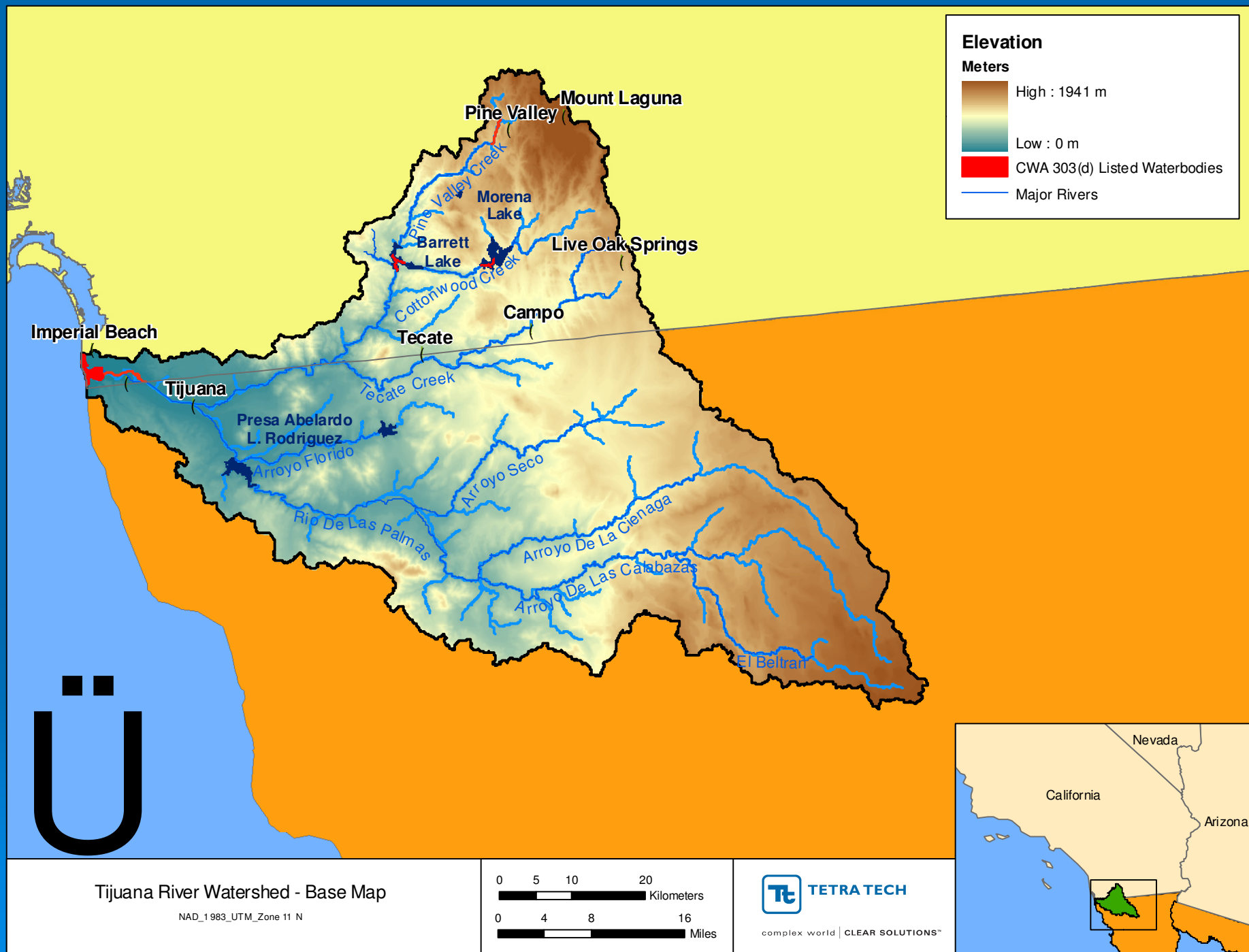


Public Workshop Tijuana River and Estuary Sediment and Trash TMDLs

January 20, 2011

Charles Cheng,



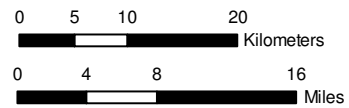


- Contributing Subwatersheds
- Subwatersheds

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Tijuana River Watershed - Contributing Subwatersheds

NAD 1983 UTM Zone 11 N



Beneficial Uses

Inland Surface Waters	Hydrologic Unit Basin Number	BENEFICIAL USE														
		MUN	AGR	IND	PROC	GWR	FRSH	POW	REC1	REC2	BIO	WARM	COLD	WILD	RARE	SPWN
Tijuana River Watershed - unnamed intermittent streams	11.12	+	●	○					○	●		●		●		
Coastal Waters	Hydrologic Unit Basin Number	BENEFICIAL USE														
		IND	NAV	REC1	REC2	COMM	BIO	EST	WILD	RARE	MAR	AQUA	MIGR	SPWN	WARM	SHELL
Tijuana River Estuary	11.11			●	●	●	●	●	●	●	●		●	●		●



Tijuana River mouth
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Water Quality Objectives

➤ **SEDIMENT**

- *The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.*

➤ **SUSPENDED AND SETTLEABLE SOLIDS**

- *Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.*

➤ **FLOATING MATERIAL**

- *Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.*



Waterbody-Pollutant Combinations as listed on 2008 303(d) list

Tijuana River	Tijuana River Estuary
Eutrophic (6298)	Turbidity (5831)
Indicator Bacteria (6299)	Lead (6115)
Low DO (6301)	Nickel (6616)
Pesticides (6302)	Pesticides (6159)
Solids (6304)	Thallium (6161)
Synthetic Organics (6306)	Trash (6163)
Trace Elements (6639)	Eutrophic (6644)
Trash (6641)	Indicator Bacteria (6646)
Selenium (16650)	
Surfactants (MBAS) (16652)	
Sedimentation/Siltation (16915)	




For Sediment...

➤ EPA Guidance Document

- “Protocol for Developing Sediment TMDLs”, October 1999

➤ Principles for Developing Sediment TMDL

- Process complexity and lack of certainty
 - Combination of monitoring, modeling, qualitative assessment
 - Iterative approach
 - Establish baseline condition
 - Water quality indicators and target values
 - Alternative measures acceptable
- 

For Trash...

- TMDL, WLA, LA all equal to zero
 - No assimilative capacity for trash
 - Policy decision, not science-based
- State Water Board is developing a trash policy
 - Alternative to TMDL
 - Can be implemented through other regulatory mechanisms

Challenges

- What is the natural sediment loading rate?
 - Highly variable in space and time
- What indicators to use?
 - TSS – adequacy for sediment transportation
 - Turbidity – applicability for sediment load
 - Others (DO, substrate particle size, biological index, etc.) – suitability, cost, time
- What impairment to address?
 - Water column vs. bottom accumulation
 - Impairment from fresh water flow

Challenges

- What watershed models to use?
to estimate rainfall and sediment load for large watershed
- What effects of dams?
Dams control about 73% of the watershed area, which would stop sediment but would contribute to runoff in extreme events.



Challenges

➤ Load Estimates from Mexico

- Land use information
- Sediment/trash generation rates
- Add uncertainty for TMDLs, WLAs, LAs

➤ Bi-national Issue

- US laws cannot regulate Mexican discharges
 - More difficult to attain TMDLs
 - Need cooperative actions
- 

Comments

- Written comments will be accepted until February 3, 2011 at 5:00 pm
- Submit written comments to:
 - By mail: Mr. Charles Cheng
San Diego Water Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
 - By fax: (858) 571-6972
 - By email: ccheng@waterboards.ca.gov

Please Sign-up on the Lyris List

- “Tijuana River and Estuary TMDLs”
electronic mailing list subscription:

http://www.waterboards.ca.gov/resources/email_subscriptions/reg9_subscribe.shtml



For More Information

- San Diego Water Board's Tijuana River and Estuary TMDLs Webpage:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/TijuanaRiverValley.shtml

